

## **CLASSIFICATION OF FACE GENDER AND EXPRESSION IN DIFFERENT SPATIAL FREQUENCY BANDS.**

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The role of different spatial frequency bands on gender and expression categorization was studied in three experiments. Reaction times were measured for unfiltered, low-pass (cut-off frequency of 1 cycle/deg) and high-pass (cut-off frequency of 3 cycles/deg) filtered faces. Filtered and unfiltered faces were equated in root-mean-squared contrast. For low-pass filtered faces reaction times were higher than unfiltered and high-pass filtered faces in both categorization tasks. In the expression task, these results were obtained with expressive faces presented in isolation (Experiment 1) and also with neutral-expressive dynamic sequences where each expressive face was preceded by a briefly presented neutral version of the same face (Experiment 2). For high-pass filtered faces different effects were observed on gender and expression categorization. While both speed and accuracy of gender categorization were reduced comparing to unfiltered faces, the efficiency of expression classification remained similar. Finally, we found no differences in reaction times between the effects of spatial frequency filtering on gender categorization with expressive and non expressive faces (Experiment 3). These results show a common role of information from the high spatial frequency band in the categorization of gender and expression.

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